generating a coded optical signal in response to the coded shadow impinging thereon;

an array of charge coupled devices, the array being responsive to the coded optical signal and generating a coded electrical signal in response thereto; [and]

a signal processor, the signal processor being responsive to the coded electrical signal and decoding the coded electrical signal to generate an image signal therefrom, the image signal being representative of an image of the non-focusable gamma ray emitting source; and

a display, the display including a visual representation of an area in a field of view of the imaging system and wherein a representative image of the source responsive to the image signal is superimposed on the visual representation.

8. (Amended) A gamma ray imaging system as defined by Claim 7, wherein the image intensifier comprises [an] a multistage image intensifier tube thereby providing enhanced system sensitivity.

17. (Amended) A method of generating a representative image of a non-focusable gamma ray emitting source, comprising:

providing a gamma ray imaging device including a coded mask, the coded mask receiving non-focusable gamma rays emitted by [a] at least one source and generating a coded shadow in response to the gamma rays received thereby, a position sensitive detector situated with respect to the coded mask to allow the coded shadow generated by the mask to impinge thereon, the position sensitive detector generating a coded optical signal in response to the coded shadow impinging thereon, an array of charge coupled devices, the array being

responsive to the coded optical signal and generating a coded electrical signal in response thereto, and a signal processor, the signal processor being responsive to the coded electrical signal and decoding the coded electrical signal to generate an image signal therefrom;

situating the gamma ray imaging device so that a gamma ray emitting source is within a field of view of the device; [and

displaying the image signal generated by the signal processor, the displayed image signal being representative of an image of the gamma ray emitting source]

creating a visual representation of an area in the field of view of the device; and

superimposing the image signal onto the visual representation of the area in the field of view of the device.

19. (Amended) An X-ray imaging system for providing an image of [an] a non-focusable X-ray emitting source, which comprises:

a coded mask, the coded mask receiving non-focusable X-rays emitted by [a] at least one source, the coded mask generating a coded shadow in response to the X-rays received thereby;

a position sensitive detector situated with respect to the coded mask to allow the coded shadow generated by the mask to impinge thereon, the position sensitive detector generating a coded optical signal in response to the coded shadow impinging thereon;

an array of charge coupled devices, the array being responsive to the coded optical signal and generating a coded electrical signal in response thereto; [and]

a signal processor, the signal processor being

responsive to the coded electrical signal and decoding the coded electrical signal to generate an image signal therefrom, the image signal being representative of an image of the non-focusable X-ray emitting source; and

a display, the display including a visual representation of an area in a field of view of the imaging system and wherein a representative image of the source responsive to the image signal is superimposed on the visual representation.

Please add the following new claims as follows:

--31. A gamma ray imaging system as defined by Claim 1, wherein the array of charge coupled devices are thermoelectrically cooled to increase a signal-to-noise ratio.

32. An X-ray imaging system as defined by Claim 19, wherein the array of charge coupled devices are thermoelectrically cooled to increase a signal-to-noise ratio.

33. A gamma ray imaging system for providing an image of a gamma ray emitting source, which comprises:

a coded mask including a uniformly redundant array, the coded mask receiving non-focusable gamma rays emitted by at least one source, the coded mask generating a coded shadow in response to the gamma rays received thereby;

a glass fiber scintillator situated with respect to the coded mask to allow the coded shadow generated by the mask to impinge thereon, the scintillator generating a coded optical signal in response to the coded shadow impinging thereon;

an optical fiber taper having a first end coupled to the scintillator, the optical fiber taper transferring the

coded optical signal to an image intensifier;

a multistage image intensifier tube, having an input coupled to a second end of the optical fiber taper, the image intensifier amplifying and intensifying the coded optical signal received from the optical fiber taper to provide increased sensitivity to the system;

an array of charge coupled devices, the array being coupled to an output of the multistage image intensifier tube and generating a coded electrical signal in response to the coded optical signal received therefrom, the array being thermoelectrically cooled to improve a signal-to-noise ratio;

a digital signal processor, the digital signal processor receiving the coded electrical signal from the array of charge coupled devices and decoding the coded electrical signal to generate an image signal therefrom, the image signal being representative of an image of the non-focusable gamma ray emitting source; and

a monitor, the monitor being responsive to the image signal for displaying a representative image of the source.

34. A method for scanning facilities having a plurality of potential radiation sources, comprising the steps of:

scanning an area with a hand-held, portable radiation imaging device, the imaging device including a coded mask having a uniformly redundant array for receiving radiation emitted from at least one source and generating a coded shadow therefrom, a glass fiber scintillator positioned to receive the coded shadow generated by the mask, the scintillator generating a coded optical signal in response to the shadow impinging thereon, an array of charge coupled devices for receiving the coded optical signal from the scintillator and generating a coded electrical signal therefrom;

transmitting the coded electrical signal from the array of charge coupled devices to a remote location;

processing the coded electrical signal to decode the signal and generate an image signal therefrom;

displaying the image signal to create a representative image of the at least one source at a remote location from the portable radiation imaging device; and

superimposing the representative image onto a visual representation of a field of view of the portable radiation imaging device to specifically illustrate the source of radiation.--

REMARKS

The Office Action dated December 16, 1994 and the references cited therein have been carefully considered. The claims have been amended in a sincere effort to define more clearly and more specifically features of Applicants' invention that distinguish over the art of record.

In the Office Action, the Oath or Declaration has been objected to as not providing a post office address as required by 37 C.F.R. § 1.33(a). In compliance with the Examiner's objection, Applicants' post office addresses are as follows: Walter Chiou, 681 Interlaken Lane, North Babylon, New York 11703, and Richard C. Augeri, 87 Munson Avenue, West Hempstead, New York 11552.

The drawings have been objected to under 37 C.F.R. § 1.83(a) as not showing every feature of the invention specified in the claims. More specifically, the "means for adjusting a separation distance" was noted by the Examiner not